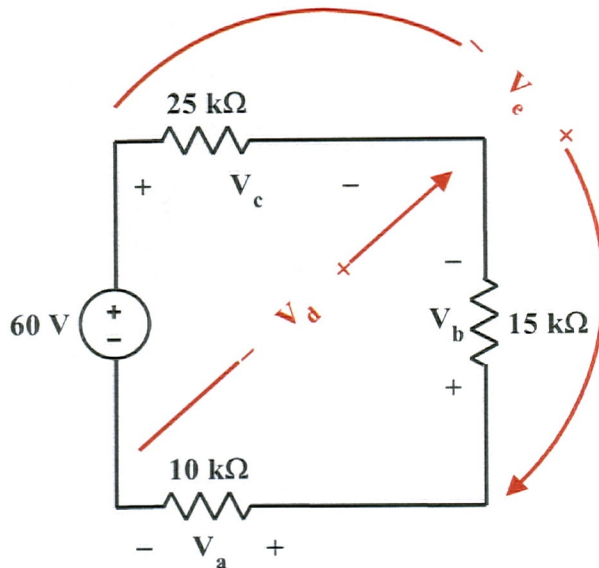


EE/EET 2240
Homework Problem #09



- a. Use the voltage divider equation to determine the value of V_a .

$$V_a = \frac{10k\Omega}{10k\Omega + 15k\Omega + 25k\Omega} \cdot 60V = 12V$$

- b. Use the voltage divider equation to determine the value of V_b .

$$V_b = - \frac{15k\Omega}{10k\Omega + 15k\Omega + 25k\Omega} \cdot 60V = -18V$$

- c. Use the voltage divider equation to determine the value of V_c .

$$V_c = \frac{25k\Omega}{10k\Omega + 15k\Omega + 25k\Omega} \cdot 60V = 30V$$

- d. Use any method to determine the value of V_d .

$$V_d = -V_b + V_a = -(-18V) + 12V = 30V$$

$$\text{OR } V_d = -V_c + 60V = -30V + 60V = 30V$$

- e. Use any method to determine the value of V_e .

$$V_e = V_b - V_c = -18V - 30V = -48V$$

$$\text{OR } V_e = V_a - 60V = 12V - 60V = -48V$$